

WHAT IS CLAIMED IS:

1. A semiconductor device comprising:

a semiconductor member having thereon a plurality of interconnect pads: and

a mounting member having a plurality of electrode terminals electrically and mechanically connected to the

5 *antecedent* respective interconnect pads for mounting the semiconductor chip on the mounting member,

the electrode terminals forming a plurality of I/O cells each having part of the electrode terminals, the part of electrode terminals including signal terminals, the I/O 10 cells forming a first group of the I/O cells and a second group of I/O cells disposed on an inner position of the mounting member with respect to the first group.

*what
d. you
mean by
"the part"*

2. The semiconductor device as defined in claim 1, wherein the semiconductor member is a semiconductor chip, the electrode terminals are internal electrodes disposed on a bottom surface of the semiconductor chip, 5 and the mounting member is a package substrate used for packaging thereon the semiconductor chip.

*R there
2 chips 2
112, 2nd*

A

3. The semiconductor device as defined in claim 1,

09876396-060701

wherein the mounting member is a semiconductor package mounting a semiconductor chip on a packaging substrate, the electrode terminals are ball electrodes disposed on a bottom surface of the packaging substrate, and the substrate is a mounting substrate for forming a specified circuit by mounting the semiconductor package thereon.

4. The semiconductor device as defined in claim 1, wherein the I/O ^{cells} includes only the electrode terminals for signals or the electrode terminals for signals, power and ground intermingled among one another.

5. The semiconductor device as defined in claim 4, wherein the I/O ^{cells} includes peripherals. *done if the cells "are in the periphery"*

6. The semiconductor device as defined in claim 1, wherein an interconnect line is connected to the interconnect pad, and the interconnect lines connected to the interconnect pad of the at least one of the I/O cells are formed in a single interconnect layer.

7. The semiconductor device as defined in claim 6, wherein the substrate includes the interconnect pad and the interconnect line electrically connected to the

object

(12, 2nd)

(12, 2-1)
is it
one line or
a plurality
of lines?

same as 6

interconnect

(12, 2nd)

or line

09876306-060701

interconnect pad in the single interconnect layer formed
 5 on the surface of the substrate.

8. The semiconductor device as defined in claim 7,
 wherein the interconnect lines connected to the I/O cells
 located on inner positions extend between the I/O cells
 located on ~~the~~ ^{an} outer periphery.

9. The semiconductor device as defined in claim 6,
 wherein the interconnect pads and the interconnect lines ~~the rods~~
 electrically connected to the interconnect pads are formed ~~on the line~~
 as a multi-layered interconnect layer in the substrate. ~~formed as a multi-layered interconnect layer~~
 OK

10. The semiconductor device as defined in claim 9,
 wherein at least one of the first group and the second
 group includes an outer group and an inner group
 disposed on the inner position of the mounting member
 5 with respect to the outer group. OK, see claim 1

11. The semiconductor device as defined in claim 10,
 wherein the interconnect lines connected ^{group of the} to the
^{ob red} interconnect pads corresponding to the first I/O cells and
 the interconnect lines connected to the interconnect pads
 5 corresponding to the second I/O cells are formed in
 different interconnect layers.

09876396-060701